CONDUCTIVE STRUCTURES INCLUDING AIRCRAFT ANTENNAE AND ASSOCIATED METHODS OF FORMATION

ABSTRACT OF THE DISCLOSURE

Conductive structures, including aircraft antennae and associated methods of formation, are disclosed. An antenna in accordance with one embodiment of the invention can include a flexible circuit material having a substrate and at least one conductive layer adjacent to the substrate. The flexible circuit material can be rolled to form a cylindrical or partially cylindrical antenna, such as a dipole antenna. The conductive material can further include circuit elements, such as leads, conductive lines, vias, and/or other elements electrically coupled to the antenna. The flexible circuit material can also support a transmitter and/or receiver that is coupled to the antenna via the circuitry. Accordingly, the antenna can be formed integrally with the circuitry and can be configured and positioned for enhanced signal reception and/or transmission.